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ABSTRACT

Mixed metal aluminum nitride and boride diffusion barriers and electrodes for integrated circuits, particularly for DRAM cell capacitors. Also provided are methods for CVD deposition of $M_xAl_yN_zB_w$ alloy diffusion barriers, wherein M is Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, or W; x is greater than zero; y is greater than or equal to zero; the sum of z and w is greater than zero; and wherein when y is zero, z and w are both greater than zero.